(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 10 February 2005 (10.02.2005)

PCT

(10) International Publication Number WO 2005/013387 A1

(51) International Patent Classification⁷:

H01L 51/20

(21) International Application Number:

PCT/JP2004/011414

- (22) International Filing Date: 3 August 2004 (03.08.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2003-285755

4 August 2003 (04.08.2003) J

- (71) Applicant (for all designated States except US): FUJI PHOTO FILM CO., LTD. [JP/JP]; 210, Nakanuma, Minami-Ashigara-shi, Kanagawa, 2500123 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): IGARASHI, Tatsuya [JP/JP]; c/o FUJI PHOTO FILM CO., LTD., 210, Nakanuma, Minami-Ashigara-shi, Kanagawa, 2500123 (JP). NARIYUKI, Fumito [JP/JP]; c/o FUJI PHOTO FILM CO., LTD., 210, Nakanuma, Minami-Ashigara-shi, Kanagawa, 2500123 (JP).

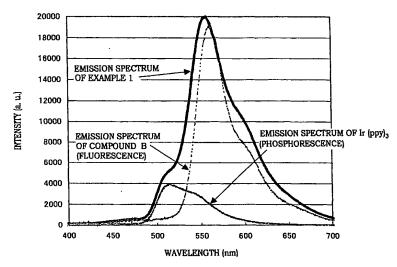
- (74) Agents: NAKAJIMA, Jun et al.; TAIYO, NAKAJIMA & KATO, Seventh Floor, HK-Shinjuku Bldg., 3-17, Shinjuku 4-chome, Shinjuku-ku, Tokyo, 1600022 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

[Continued on next page]

(54) Title: ORGANIC ELECTROLUMINESCENT DEVICE



(57) Abstract: An organic electroluminescent device having at least one organic layer containing a light-emitting layer between a pair of electrodes, wherein the organic electroluminescent device contains a compound emitting fluorescence at a time that voltage is applied, and the light emission at the time that voltage is applied is mainly derived from the light emission of a fluorescent compound, and the external quantum efficiency of the device is 6 % or more. It is preferable that the organic electroluminescent device contain an amplifying agent performing the function of amplifying the number of singlet excitons generated at the time that voltage is applied, thus amplifying the intensity of the light emission. The amplifying agent is a transition metal complex, in particular, an iridium complex, a platinum complex, a rhenium complex, a ruthenium complex, a palladium complex, a rhodium complex, a copper complex or a rare earth device complex. The compound emitting fluorescence if preferably a fused aromatic compound.



 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.